THE QUARTERLY MAGAZINE OF THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY
VOL. 12/NO. 2 FALL 1973

Terra

The Museum's Gift to You

If you're wondering why TERRA has a hole punched through it, you might turn to page nine and look at the Museum Alliance's early holiday gift to you. We want you to think of us all the year, of museum exhibits, educational programs, special shows, films, concerts, lectures and trips, and a beautiful daily reminder seemed a good way. All but two of the color photographs are from previous editions of TERRA, another Museum benefit. When it is time to renew membership, remember ALL that you are receiving for a very small amount. You can let us know how much you appreciate your gift by using it with pleasure, and by giving it to your friends. An order form is on page 40, the back of the calendar.

Channel Islands Trip

California's Channel Islands for six days of exploration and enjoyment, November 10 through 15, 1973: the Museum Alliance offers this exceptional opportunity to 30 lucky adventurers.

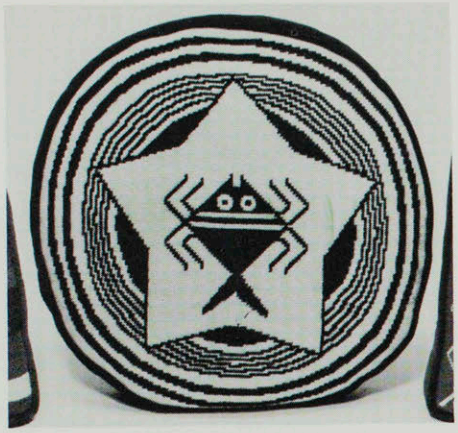
The QUALIFIER 105, the sturdy, comfortable vessel used for Alliance whale trips, will sail from Channel Islands Marina (Oxnard) to Anacapa, Santa Cruz, Santa Rosa, and San Miguel Islands. The island owners invite you to visit wildlife, flora, and archaeology of these rarely visited gems in the company of expert guides. Evening programs aboard ship by the scientific leaders will prepare you for the next day's exploration ashore.

Your leaders will be Dr. Charles E. Rozaire, archaeologist, Dr. Kenneth E. Stager, ornithologist-mammalogist, both members of our Museum staff, and Dr. Ralph Philbrick, botanist from the Santa Barbara Botanic Gardens.

Cost of the cruise is $375, which includes your berthing accommodations and meals. Applicants must be at least 16 years of age.

Phone 749-3583 promptly for your application form and other information. Space is limited, and reservations will be coming in fast for this fascinating voyage.

Indian Motifs in Needlework



Motifs from the museum's collections of American Indian beadwork, ceramics and weaving have been adapted for needlework by a young Southern California artist, Gay Ann Rogers. As a donation to the fund raising efforts of the TERRA Committee and museum, Mrs. Rogers, an Alliance member and experienced needlework designer, has created four kits which will be available this fall in the gift shop of the museum.

Plant Swap

Join us for an informal Plant Swap in the museum parking lot in November. Bring plant divisions, cuttings (rooted and otherwise), and any other plant materials both alive and dried. If you have nothing to trade, we happily accept donations for the Botany Book Fund. For information phone 746-0410 and ask for Botany dept.

THE MUSEUM ALLIANCE IS REPEATING ITS CHERRY BLOSSOMS, WASHINGTON, WINTERTHUR EIGHT DAY TOUR IN APRIL OF 1974. IT WAS A TREMENDOUS SUCCESS! AT THE REQUEST OF THE MEMBERS IT IS BEING OFFERED AGAIN. For information contact Alathena Miller, Kerr Travel Service, Crestview 3-0150.

On the Cover

The brilliant October coloring of a Pennsylvania hardwood forest is the home of this group of white tail deer. The animals feed on the brush along the edges of forests from southern Canada to Panama, traveling in small herds protected by the vegetation. North American Habitat Group. Natural History Museum of Los Angeles County.

Terra®

The Quarterly magazine of THE NATURAL HISTORY MUSEUM of Los Angeles County

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ON SAFARI AMONG THE HABITATS

by **Herbert Friedmann**

with introduction by
Gretchen Sibley

As I sit at my desk on the ground floor of the Museum, small children peek in the window, full of curiosity to see what is behind the bars insuring the security of the Museum. Perhaps the most frequent question is "Where are the big animals?" And a stroll through the four large mammal habitat halls of the Museum further attest to their popularity. Pre-schoolers squeal in delight as they run from one group to another. School children pour excitedly through the halls and adults wander about enjoying the wonders of nature depicted in the animal groups. Over a million and a half people come each year to enjoy the animals shown in their natural environment. Our former director, Dr. Herbert Friedmann, presented a fine evaluation of museum habitat groups at a meeting of the American Association for the Advancement of Science in a paper entitled "The Educational Role of Museums." We include this selection for your enjoyment and enlightenment.

"In the fields covered by the natural history museums many subjects are displayed that the visitor can hardly expect to meet with in real life. Notable among these are displays of mounted specimens of animals, which come from remote corners of the world beyond the expected experience of most viewers, even in today's world of easy and rapid travel.

"This leads to an evaluation of the teaching value of such expensive, space and time and work-consuming exhibits as habitat groups. Because of the many skills involved, the artistry of the background painter, the technical and modelling expertness of the taxidermist, the painstaking and meticulous accuracy of the makers of the accessory plants and rocks, and the cost factors, including the fact that a large and costly exhibition gallery may have room for only fifteen

or so species of animals, thus exhibited, have caused many museums to prefer to emphasize smaller, less elaborate topical exhibits. These are fine and certainly advance the communication of ideas, of problems and of theories to the spectator. But the habitat groups give far more than is generally acknowledged by those who look upon them as luxuries, not worth their great cost. A few years ago I had the opportunity of explaining their value in what may be an unusual type of comparison, but which, I felt, did convince my listeners then, and which I may repeat here. The comparison is with portraits in an art gallery, limiting the comparison to portraits in the mode of representational art as practiced prior to the advent of current non-objective styles of painting.

"When a person had his portrait painted, the production of a recognizable likeness was certainly foremost in his mind, and in that of the artist. The difference between a portrait by a great master and one by a mediocre painter far transcends the mere information it conveys that the sitter had blue eyes or brown hair, or a scar on one cheek. The great painter does not merely represent the sitter; he presents him, and he presents him to us in such a way that we realize him as a personality without conscious effort on our part. In other words, a great portrait tells us much more than a mediocre one, and a large part of the pleasure we experience on looking at a great portrait is this feeling, that without any definite mental exertion on our part we have come to realize another human being more completely, more quickly, less tiringly and more pleasantly, than we otherwise could. If the mere information of physical characters were all that mattered we could hardly get the enjoyment we do from portraits of unknown, and no longer identifiable people, and we would hardly return to take a second look at paintings of named ones, as the information would have been transmitted to us on the first look. We return because we enjoy this sense of effortless realization, and this, in turn, makes us feel that our ability to apprehend has been quickened, that our mental vitality has somehow been enhanced for the moment, even if the moment be a very fleeting one.

"In a similar sense, a habitat group, if well done, presents the animal to us, whereas a lone mounted specimen without a proper setting, merely represents its outward appearance, although, in the case of very rare or unusual or seldom seen species, the fact that the mounted specimen is a real one and not a model, does help to give the viewer a feeling of first hand experience with it. But his mental picture of it is, of necessity, limited to its mere outward appearance, and if he knows anything more about it it can only be due to previous or subsequent readings by the viewer, not to the exhibit. Even in the case of well-known kinds of animals the lay visitor may have misleading notions which the 'solo' specimen cannot correct. Thus, to many people the lion is commonly thought of in such terms as a fierce denizen of the jungle, and when asked to describe what the word jungle means to them, they are all too apt to say 'the dense forest,' which, of course is not the true habitat of the animal. I do not mean to imply that every habitat group is the equivalent of a great work of art, but its inherent motivation is along the same lines. Both start out to convey facts about the sitter or the animal, and both, to the degree that they are successful, tell far more than these basic items.

"In the case of habitat groups, I have heard teachers state that there, '. . . isn't anything you can say about them.' While this is certainly not the whole case, it has a kernel of truth and that is because the groups do the saying for the teacher. The chances are that few museums today would plan to begin large halls of nothing but habitat groups as has been done in the past. A more effective communication is established by a combination of such exhibits with carefully explained thematic displays; but the habitat groups deserve mention in a discussion of the communication and educational impact of museum displays.

"Not content with the very real presentation qualities of habitat groups museums are attempting to still further enhance their effectiveness by the addition of discreetely modulated sound effects, animal sounds typical of early morning or of dusk. It comes as a surprise to many museum visitors to find that all lions do not sound like their film-sake on MGM productions. The use of sound not merely involves the visitor with another sense in addition to sight but is entirely natural because of the fact that we live in a world of sound, and that because of its pervasive presence, sound often sets a mood better than does unaided sight.

"For the present, at least, the further involvement of smell is generously left to the zoos."

Five mammal groups are represented in this edition of Terra. On your way to the Pre-Columbian hall or as you hurry to the Giftshop, take a refreshing detour into the loveliness of the habitat halls. The real thing far surpasses our pictures.

Dr. Herbert Friedmann is Director Emeritus of the Natural History Museum of Los Angeles County.

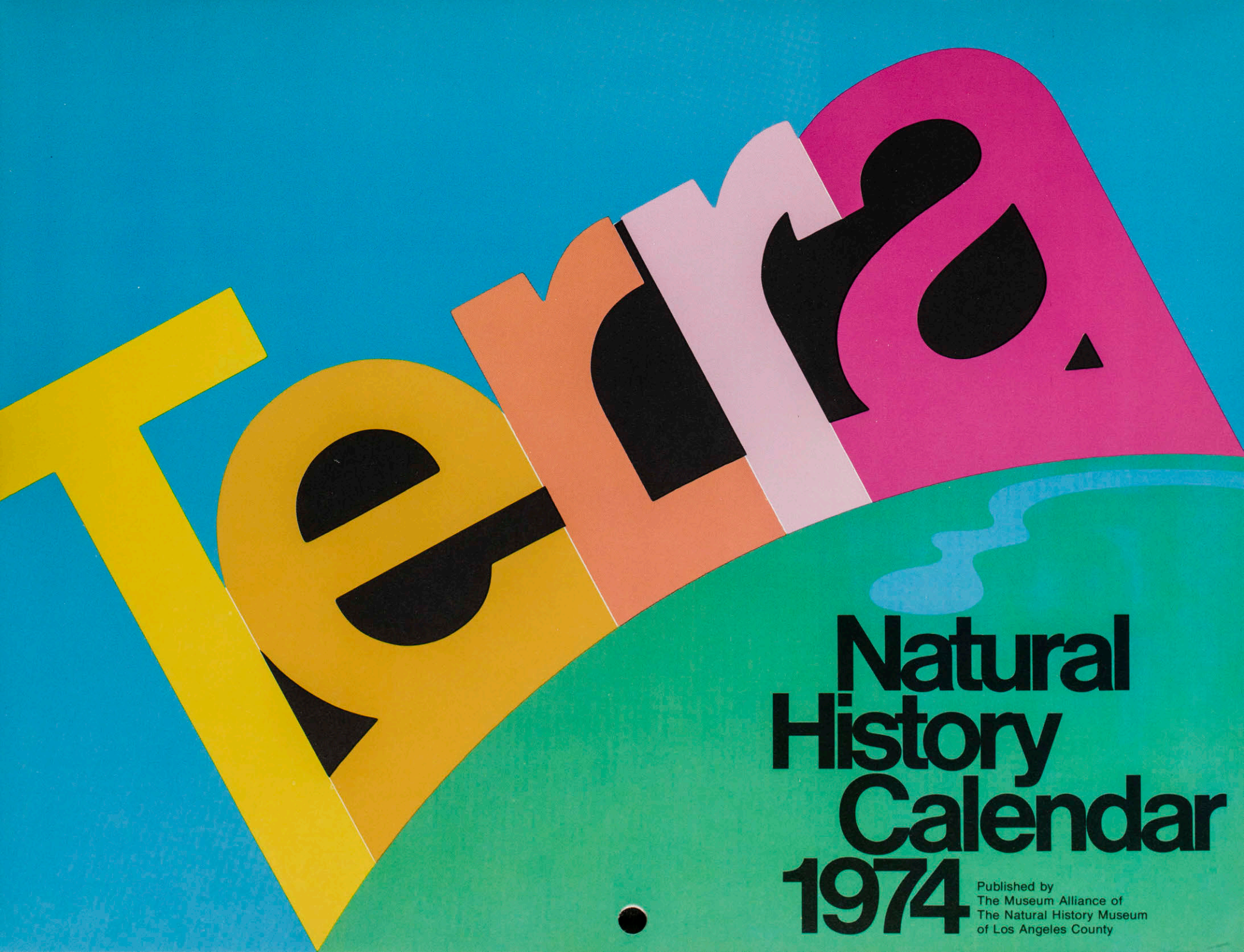
Gretchen Sibley, frequent TERRA contributor and assistant editor, is Education Specialist at the Natural History Museum of Los Angeles County.

This bighorn sheep, a subspecies of Dall's sheep, is found in the rugged mountains of north central and north western Canada. The thick coat protects it from rain and snow. While the individuals in this group are the same color, color may range from almost black to white. Horns, which continue growing all through life, are found on both males and females. But they become much thicker, longer and more curved on males.

Habitat photos by Larry Reynolds

Shallow off-coast waters of the far north are home for the walrus. Here they spend many hours collecting clams, torn from the rocks with the great tusks. Whiskers, teeth and tongue pull away the clam shells while the soft bodies are eaten. Walruses of different age and sex are shown resting on the ice, but harems are not formed. The huge males may reach three thousand pounds and the females grow to half that size. Older animals may be completely bald, but earlier in life are covered with sparse reddish-brown hair.

While hunting at night, the African leopard kills quickly, dragging its food up into a tree. Here it feeds quietly, returning from time to time to finish its kill. It follows the great herds of antelope and bands of monkeys in the savannah, choosing areas along stream beds where trees spring up, or resting in rocky outcrops. Except during mating season or when rearing young, the leopard lives alone and is an important link in controlling an over-abundance of plant eating animals.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Natural
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1974
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The Natural History Museum
of Los Angeles County

january 1974

Polar Bear—Habitat Group
Natural History Museum
of Los Angeles County

Photo by Larry Reynolds

monday	tuesday	wednesday	thursday	friday	saturday	sunday
January Appointments New Year's Eve 1973	New Year's Day **1**	**2**	**3**	**4**	**5**	**6**
7	**8**	**9**	**10**	**11**	**12**	**13**
14	**15**	**16**	**17**	**18**	**19**	**20**
21	**22**	**23**	**24**	**25**	**26**	**27**
28	**29**	**30**	**31**	**January Meetings**	**Tel. Nos.**	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

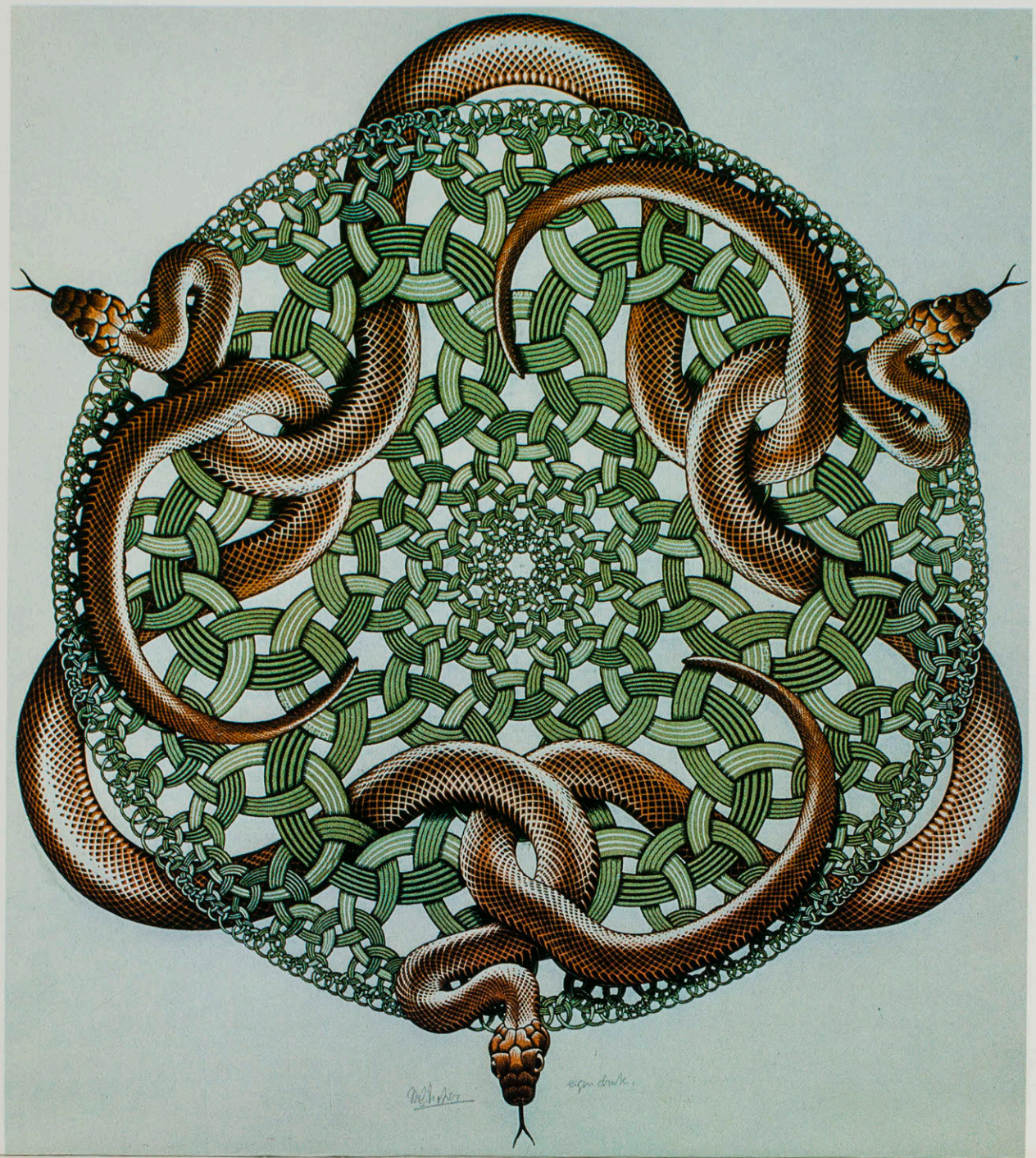
february 1974

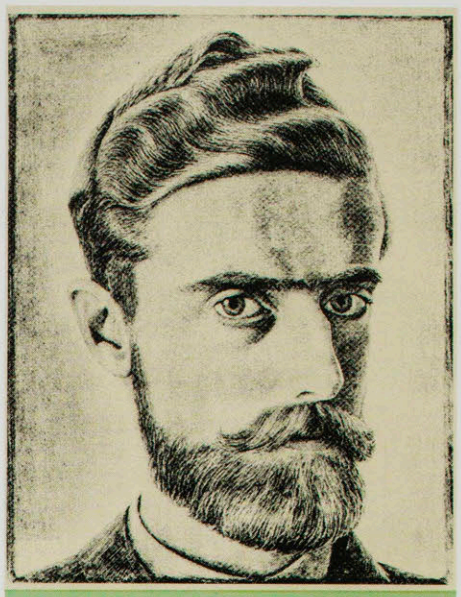
A Storybook Quilt Made By Eudotia Sturgis Wilcox in 1890. From the collection of the Natural History Museum of Los Angeles County. The handmade coverlet or bedspread was a thoroughly rural American expression and occupied many an hour on cold winter days.

Photo by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
February Appointments	February Meetings	Tel. Nos.		1	2	3
4	5	6	7	8	9	10
11	Lincoln's Birthday 12	13	St. Valentine's Day 14	15	16	17
Washington's Birthday Holiday 18	19	20	21	Washington's Birthday (actual) 22	23	24
25	26	27	28			Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

march 1974





M. C. Escher is one of those rare and curious artists without a school to which he might attach his name and his graphic output.
Born in Holland, 1898. The overwhelming number of his woodcuts are depictions of nature brought into a problematical bond of union.
Above is a self-portrait, 1929. On the left his final woodcut, Ring Snakes, 1969. In this woodcut he achieved consummate success in portraying the idea of infinity, for reason of not attempting to portray the infinite, but only suggesting it and leaving it to completion in the mind's eye.

Photo by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
March Appointments	March Meetings	Tel. Nos.	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	St. Patrick's Day 17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

april 1974

Central Lithuanian eggs are decorated in batik and scratch techniques, both of which are included here. The former are usually done in geometric shapes made up of tear-shaped elements, which, nevertheless, have symbolic names. This is also the case in other countries, such as Romania, where abstract designs are clearly recognizable to the people.

Photo by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
1	2	3	4	5	6	Passover Palm Sunday 7
8	9	10	11	Good Friday 12	13	Easter 14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30		April Appointments	April Meetings	Tel. Nos.	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

may 1974

The world's largest seed "Coco-de-mer" *(Lodoicea Maldivica)*. A rare palm indigenous to the Seychelles, produces this 50 pound monster.

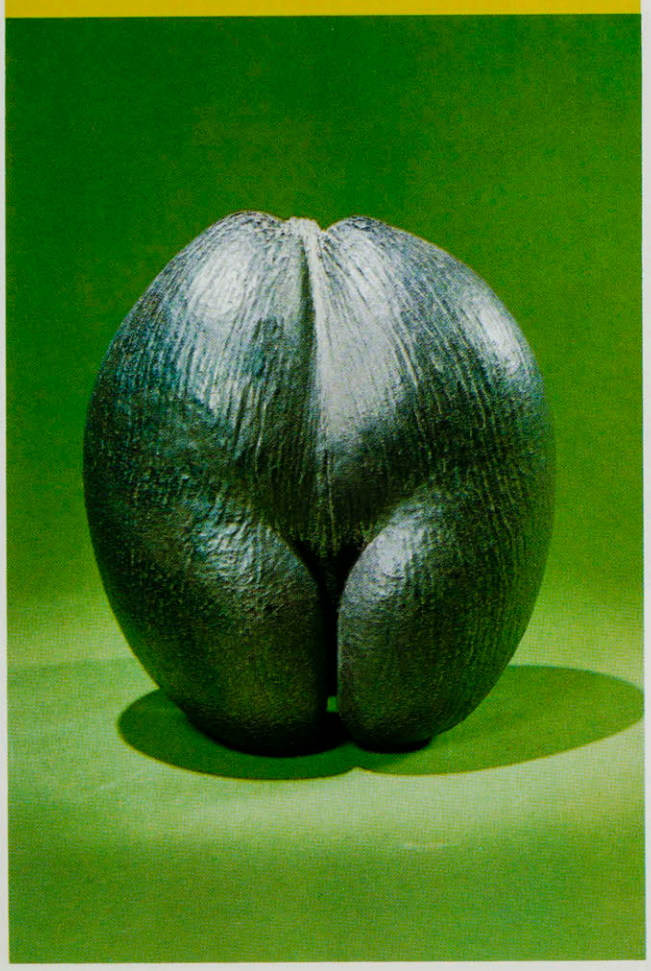


Photo by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
May Appointments	May Meetings	1	2	3	4	5
6	7	8	9	10	11	Mother's Day 12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
Memorial Day 27	28	29	30	31	Tel. Nos.	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

june 1974

The Lively Arts of Africa

Photos by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
June Appointments	June Meetings	Tel. Nos.		Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	Father's Day 16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

july 1974

South West African Galago
or "bush baby."

Photo by L. Lester

monday	tuesday	wednesday	thursday	friday	saturday	sunday
1	2	3	Independence Day 4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	July Appointments	July Meetings	Tel. Nos.	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

august 1974

Butterfly Wings
Living Pointillism

Photo by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
August Appointments	August Meetings	Tel. Nos.	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

september 1974

The Glittering-throated Emerald *(Amazilia fimbriata)* is a normally dark appearing hummingbird which is beautifully iridescent when the light is from the proper direction and this exposure shows the features of the adult male well. This hummingbird ranges widely throughout suitable habitat in lower elevations of equatorial South America. A relative, the Violet-crowned Hummingbird *(Amazilia violiceps)* range sparsely over the Mexican border in Arizona and New Mexico.

Photo by Don Bleitz

monday	tuesday	wednesday	thursday	friday	saturday	sunday
Sept. Appointments	Sept. Meetings	Tel. Nos.			Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County	1
Labor Day 2	3	4	5	6	7	8
Admission Day 9	10	11	12	13	14	15
16	Rosh Hashanah 17	18	19	20	21	22
23	24	25	Yom Kippur 26	27	28	29
30						

october 1974

Despite superstitions there is no foundation in fact that opals bring bad luck. These beauties are from the James M. Kazanjian Foundation and had a showing at The Natural History Museum of Los Angeles County.

The large triangular stone at lower center is The Sydney Queen, 43 carats. It and the other opals are set in platinum with diamonds and other precious stones. The Sydney Queen is one of the finest black opals in the world.

The Opal is the birthstone of October.

Photo. by Armando Solis

monday	tuesday	wednesday	thursday	friday	saturday	sunday
October Appointments	1	2	3	4	5	6
7	8	9	10	11	12	13
Columbus Day 14	15	16	17	18	19	20
21	22	23	24	25	26	27
Veterans Day (Except California) 28	29	30	Halloween 31	**October Meetings**	**Tel. Nos.**	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

november 1974

Suiseki, the art of appreciating and admiring a stone in its natural form, enjoying nature in miniature, is a very old art form. As early as A.D. 660, we find poems written in Chinese characters in an anthology called Man Yoshu (Collection of Myriad Leaves) which extoll the beauty seen in stones.

The philosophy behind this art is to manifest or show nature in microcosm.

Today, in modern Japan, the art of Suiseki flourishes and people of all walks of life are enthusiasts and followers of this art form.

These are all from the collection of Toy Sato, an authority on Suiseki.

Toyama-Gata (Distant mountain)

Kikuka Seki (Chrysanthemum stone)

Kikuka Seki (Chrysanthemum stone)

Photos by Armando Solis

Monyo Seki (Pattern stone)

monday	tuesday	wednesday	thursday	friday	saturday	sunday
November Appointments	November Meetings	Tel. Nos.		1	2	3
4	Election Day 5	6	7	8	9	10
Veteran's Day (California) 11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	Thanksgiving 28	29	30	Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County

december 1974

Stenocarpus sinuatus, Firewheel or Rotary Tree is from the bushlands of northern New South Wales and southern Queensland, Australia. When a branch with blooms is cut, and the stem crushed, it keeps for weeks indoors as a floral decoration.

monday	tuesday	wednesday	thursday	friday	saturday	sunday
December Appointments	December Meetings	Tel. Nos.			Every Sat. at 2 pm, a film every Sunday at 2:30 pm, a Chamber Music Concert in Jean Delacour Auditorium, Natural History Museum of L.A. County	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	Christmas Day 25	26	27	28	29
30	New Year's Eve 31					

Historia Calendarium

by **Stella Artois**

"We have no other computation of time but years. The world has used them so many ages, and yet it is a measure we have not until this day perfectly established."

Montaigne,
Essays: *Book III*

It was perhaps as early as seven thousand years ago that the concept of a calendar was formulated. In ancient Egypt there were three seasons, *Akhet, Pert,* and *Shemu* being respectively the seasons of sowing, growing and harvest, and inundation. Astronomer-priests guarded their secrets in conjunction with the mathematician-architects who constructed the pyramids in such a fashion as to quite accurately approximate the position of the earth with respect to that of the sun in terms of the shadows cast; foremost among these is the great pyramid at Gizeh. Thus for these ancient peoples, the new year began around September 25 coinciding with the autumnal equinox. Prior to observations of the shadows cast by the sun, it had been simple to measure time in relation to the phases of the moon; such moon calendars ended up having 360 days in a year, twelve months of thirty days, and twenty-four hours per day. The early Egyptians discovered the error of this calculation and added five days to each year; such days were given over to priestly discretion such as religious festival days.

The ceremony of the New Month. Among the Jews this was announced with a blare of trumpets. From the Roman *Kalends* meaning a calling together we derive our term Calendar. (woodcut from *Astronomy of the Bible*)

Athens was seemingly a consummate civilization during her heyday, but the problem of time plagued these people. The great Greek playwright Aristophanes in his play *The Clouds* could not resist jests regarding calendrical error. The Moon scolds the Athenians for such confusion, for when the Gods were in mourning the Athenians were making merry, and when sacrifices to the Gods were in order, the courts and businesses were in session. To offset this obvious defect of Greek calculations, days were intercalated but often for such unwise purposes as to shorten a term of office, or to increase revenues.

With the ascendancy of Rome and Julius Caesar coming into power, the situation was clarified. The Emperor called upon the wise Egyptian astronomer Sosigenes to give him a sensible calendar, thus a year of *365* days and six hours was established and a Leap Year of *366* days every four years was introduced. The year was divided into twelve months (one month, July formerly Quintilis, being named for the Emperor), the even months being of *30* days and the odd ones being *31* days. A further division into the *Kalends, Nones* and *Ides* was established. It is from *Kalends* that we derive our term Calendar, for during the *Kalends,* or the 1st of each month, the priests called (*calare,* to call) their people together to announce festival days. The Ides fell on the 15th of March, May, July and October and on the 13th in other months. The *Nones* were the 8th day before the *Ides.* March had been the first month of the year, as implied by December, however, Caesar under the advice of his Egyptian consul changed the beginning of the year to January 1, shortly following the winter solstice. Dates were calculated in reverse, and the week was unknown, the latter being of Semitic origin and not employed until the 4th century A.D.

A 17th century baton-calendar. Each face of the baton bears a period of three months. These were common in France and England

19th century vignette of an astrologer-astronomer viewing a comet

There was more substance to this "Julian Calendar" than any to that date (45 B.C.). Tragically, the assassination of Julius the following year left his office to the vain Augustus Caesar who in no way equalled his illustrious uncle Julius. In 8 B.C., Augustus persuaded the Roman Senate to rename the month of Sextilis to August. So that he might be honored as his noble predecessor, he also recommended that the month be as long as July by removing a day from February which had 30 days in the Julian Calendar during leap year. To add further confusion, the 31st days of September and November were given to October and December; the rationale being that this avoided three successive months of 31 days each. All for vanity. It must be said, however, that Julius Caesar was not altogether wise in compromising himself with Roman astrologers who put more emphasis on the phases of the moon; for whereas Julius would have begun his year on December 25 (the winter solstice, now calculated as December 22), he found it politically wise to take the suggestion of the astrologers and the beginning of the year was fixed at January). Hence the civil calendar lagged behind the solar year by six days. Perhaps it was a wise and expedient move, for the people of Rome put more stock in their astrologers than in the astronomers who were largely of foreign origin. Julius knew well the overwhelming sentiment of Rome.

As centuries passed, it became increasingly apparent that the spring equinox was steadily retrogressing as a result of misunderstandings of the Julian Leap Year and the Julian calendar was longer than the solar year by 11 minutes and 14 seconds. It was for this reason that in 1582 A.D. Pope Gregory XIII, under the consul of his mathematicians and astronomers decreed a reform so that March 21 on the Julian calendar in 1582 was on March 11. As sensible as

The doctrine of the four humors was an essential part of all early calendars. This cut illustrates the choleric, or fiery, humor. (woodcut from an Augsburg calendar of 1490)

The signs governing one's date of birth are depicted on that part of the body they govern. (woodcut, Augsburg calendar of 1490)

A 19th century concept of the man in the moon

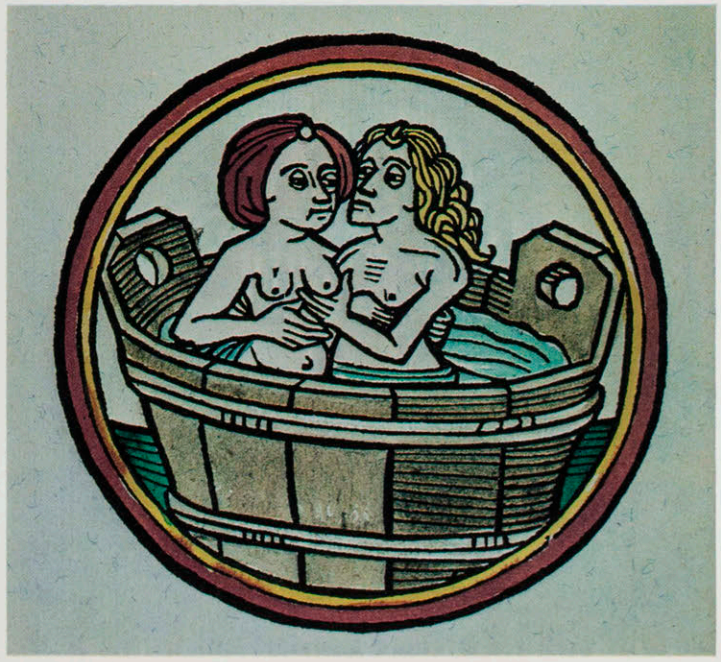
this calendar was, Protestant countries did not adopt it until 1700 and in Great Britain and her American Colonies not until 1750–1752. Thus President Washington was born on February 12 Old Style and not until the early 19th century was the birthday observed on February 22. Some of the tombstones of that period bear dates followed by O.S. or N.S. indicating that dating to be either Old Style or New Style.

There can be no doubt that these changes profoundly confused the general populace and left intellectuals unsettled. Montaigne was distressed by "the many changes of this reformation" and in his third book of essays he muses, "And what if some say that the heavens in growing old compress themselves toward us and cast into an uncertainty hours and days?" Notions of time continue to puzzle astrophysicists, especially in man's ventures into space and for those of us who are merely shuttled between continents by aircraft still marvel at the supposed loss and gain of time.

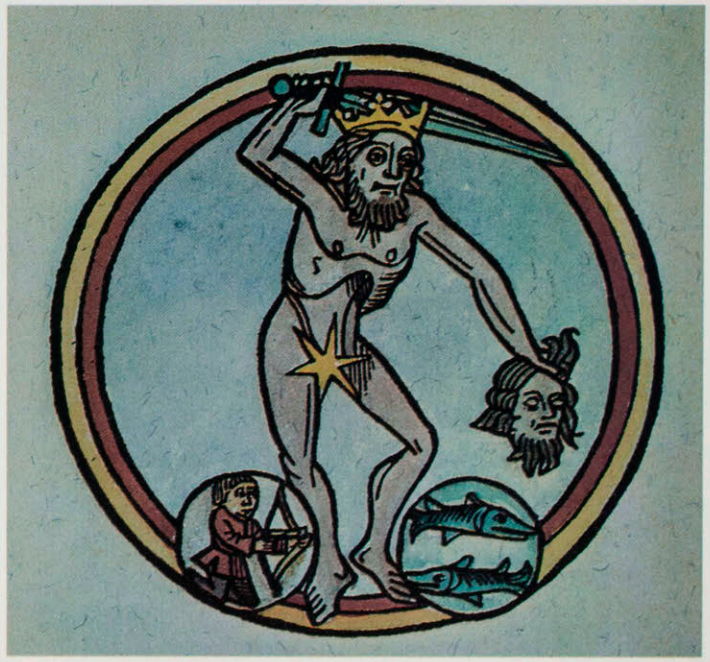
Most of the world continues to use the Gregorian calendar in which the date of the equinox will change only one day in 3000 years; for practical purposes this is not a bother. The Eastern Orthodox church adhered to the Julian calendar until 1923 and then adopted a scheme which is still more accurate than the Gregorian, i.e., century years are leap years only in cases where their numbers when divided by nine, give a remainder of two or six. If this seems a bit puzzling (and it is), it is equivalent to omitting seven leap years every 900 years.

It seems ironical that at this time in history when calculations are made in terms of a billionth of a second by the most sophisticated equipment in the history of technology, most of us adhere to a calendar that is scarred with the errors of Julius Caesar, his successor Augustus, Pope Gregory XIII, and modern reformists who emulate the ancient

Two astrologers exchange their philosophies of the influence of the heavens on man's destiny. (woodcut from an Augsburg calendar of 1490)



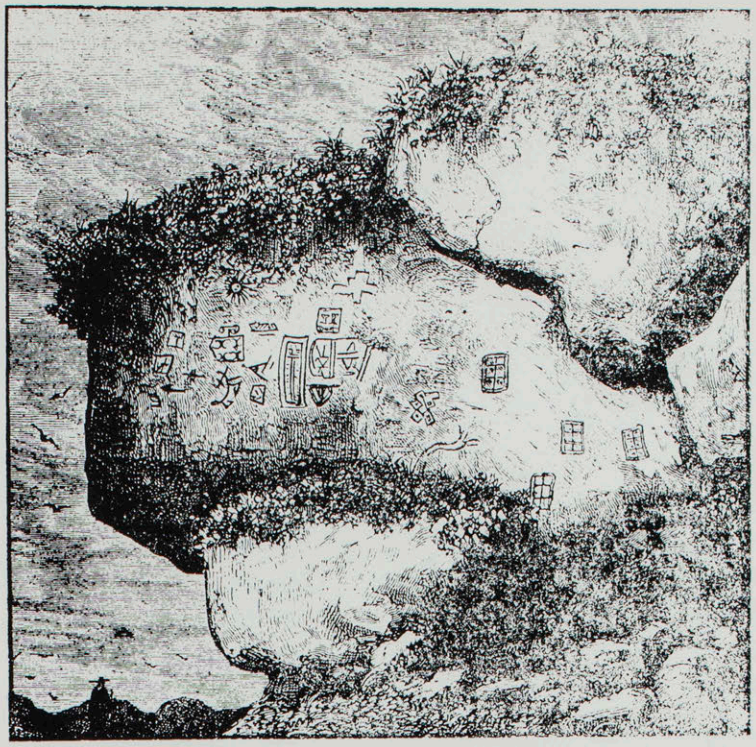
This woodcut from an Augsburg calendar of 1490 presents some interesting ideas as to what one might do during the long winter months (presumably bathe).



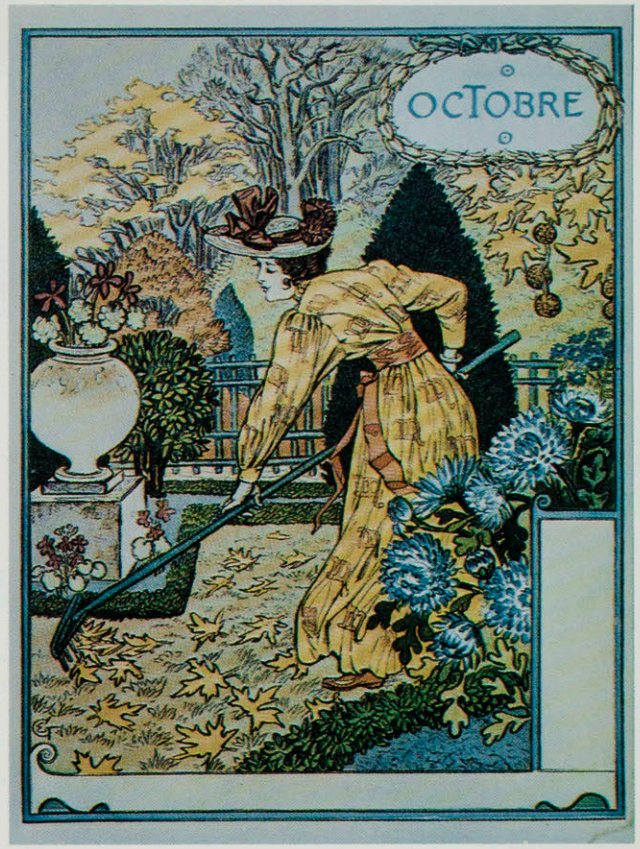
Ruling planets figured into the astrological aspects of early calendars. Here Jupiter stands over Pisces and Saggitarius which he dominates. (woodcut from Augsburg calendar of 1490)

Athenians in their whimsical distribution of holidays. It is not because more sensible systems are lacking, for in 1929 the United States submitted a document on calendar reform wrought by a national committee which received such wide acceptance in national polls that it was anticipated that this country would have a new calendar by 1931. This World Calendar divides the year into equal halves and quarters containing 364 days. In each quarter the first month would have 31 days, and the other two would have 30days.Other months would have 26days leaving one day each year as Year Day and would be disposed between December and January; Leap Day would be intercalated each fourth year between June and July. A myriad of other proposals have been advanced, but it seems that Pope Gregory will prevail for some time to come.

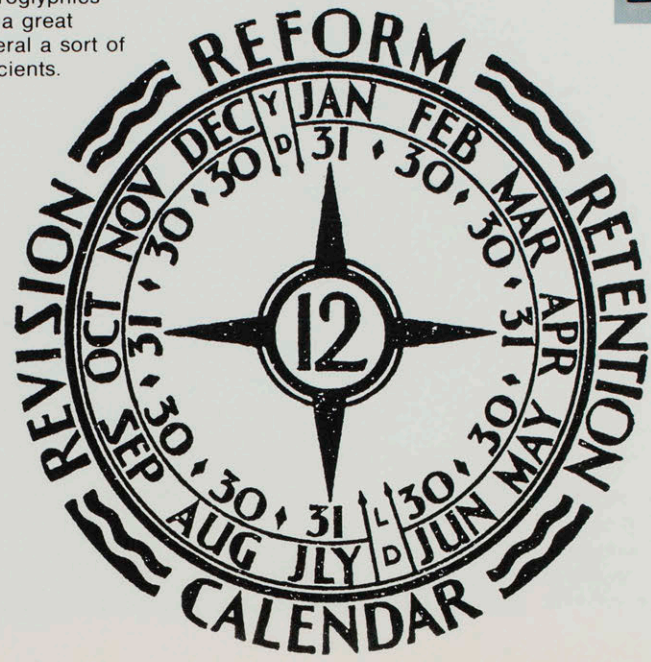
While the sun and the moon were the primary stellar bodies used to calculate time, other planets figured into calendars in terms of their effects upon individuals born under their influence; it would be impossible to discuss the calendar in the western world without considering astrology, especially with the contemporary resurgent interest in this discipline. Every plant, animal and man must of necessity be under the dominion of a particular planet, and from this one may extrapolate the position of other celestial bodies and their influence on the fated being at any given time. It is also believed that each astrological sign exerts an influence on a particular part of the body, Pisces governing the feet, Scorpio controlling the genitalia, etc. The heavens also determine the four humors or complexions, Phlegmatic, Melancholic, Sanguine and Choleric. Thus the calendar, originally derived from positions of the sun and moon, was extended so that each day was governed by a particular planet and related celestial bodies. It was noted that with each season the wind



The great rock of Pandi (Colombia) near the grotto of Alfonsa. These hieroglyphics represent the sun, a great deluge and in general a sort of calendar of the ancients.



Grasset was one of the great fin-de-siecle calendar artists in France. His months were relegated to obscure corners to accommodate elegant ladies in seasonal attire.



The World Calendar represents a revision of this century incorporating Year Day and Leap Day, falling on the second half of a double Saturday. This reverts to a system devised by the Jews of the Mosaic Era. While sound, this calendar has not found wide acceptance.

came from one predominant direction, so that in an Augsburg Calendar of 1490 we see figured these figures as puffing faces. These winds were also used to account for the tempers of men.

While our Old World days were ruled by planets, Saturn-day, Sunday, Moon-day, etc., the ancient Maya revered each day as a male diety or pair of dieties. Not even the ancient Athenians were so absorbed with the notion of time as were the Maya. Every stela and altar was so placed and designed to mark the passage of time. In fact, of the 1,000 or so Maya glyphic texts thus far discovered, all deal with the passage of time and calendrical calculations. Divinatory almanacs were extrapolated from observations on Venus, the moon and the sun. These became important in timing the seasons for sowing, for hunting, harvesting, etc. Time was, as a concept, a burden carried through eternity by a series of divine time bearers. Maya inscriptions indicate a concept of a beginning of time being over 400 million years prior to that civilization; in contrast their concept of the future included only four millenia. Like the European world and the Aztec civilizations, theirs was a strong belief that time had an end and the world would come to a sudden halt from a combination of evils. It is curious that the Maya calculated the year to be of 360 days—exactly the same as estimated by the ancient Egyptians. As with the ancient peoples of Stonehenge, time became architecture, and buildings were far from fortuitous in construction and orientation. Among the peoples of ancient Mexico there were astronomers of remarkable skill, for we know from the Calendar Stone discovered in Mexico City in 1790, these people were able to predict eclipses from their study of the solar system. This 24-ton stone bears the kind of information that we now carry around in our pockets as a calendar of days, holidays, eclipses, etc., information that is no longer the province of a priestly caste.

When one glances at the colophon of the World Calendar, he is struck by the iconograph similarity of this diagram to that of the ancient calendar stone, although the latter bore a far greater amount of information, some fact, some myth. In terms of time, as it is now understood, our own Gregorian Calendars are little more than convenient myths by which we plot our days, and as such, differ little from the calendrical systems of the ancients.

This is Ms. Stella Artois's first appearance in print. Ms. Artois (nee Flora Zubaroff) has spent most of her life in Paris. In 1900 she left St. Petersburg (by sleigh) for that city in which she was to remain exiled for seventy-three years in the home of her companion Alphonse Bernhardt. Stella's memoirs (to be released in France next year) promise to contain all of the indiscretions of her youth including a chapter on the Wormsley Pippin Scandal. Ms. Artois, we welcome you to Terra and America.

Aztec calendar stone. The elaborate details represent the face of the sun in the center of the stone's thirteen-foot diameter, surrounded by the four mythical prehistoric symbols of Aztec cosmology, by the four directions of the compass and the twenty day-signs of the Aztec month, and by two huge serpents depicting the sky that surrounds and supports the sun.

Terra Natural History Calendar 1974
Edited by Dorothy H. Seligman
Designed by Frank F. Page/Tri-Arts

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Hungary	Nepal
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A

B

C

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Midsummer Day
Christmas in the Antarctic

by **Mary P. Goodwin**

"The next morning some of the natives paid us a visit. They are a little ugly, half-starved, beardless race—almost naked, their only clothing is a seal-skin. The women cover their nakedness with a flap of seal-skin . . . Two young children were seen at the breast entirely naked; thus they are inured from their infancy to cold and hardship. They had with them bows and arrows and harpoons made of bone and fitted to a staff. They and everything they had smelt most intolerably of train-oil (boiled seal or whale oil).

"The women and children remained in their canoes which are made of bark. In each was a fire over which the poor creatures huddled themselves. They retired before dinner; indeed no one invited them to stay. Their dirty persons, and the stench they carried about them, were enough to spoil the appetite of any European, and that would have been a real disappointment as the ship's company had not experienced such fare for some time. Roast and boiled goose (sixty two collected the day before from a rocky cove), and goose pie, a treat little known to them, and they had yet some Madeira wine left, which was the only article of provision that was mended by keeping; so that their friends in England did not, perhaps, celebrate Christmas more cheerfully than they did. This water we named Christmas Sound."

Here is Captain Cook writing in 1774. This was his third Christmas spent in southern waters. He was off the southwest coast of Tierra del Fuego, having just made the longest passage of his career, from New Zealand.

A year earlier Cook had written, "Perceiving that it was likely to be calm, I got the ship into as clear a berth as I could, where she drifted along with the ice, and by taking advantage of every light air of wind, was kept from falling aboard any of these floating isles. Here it was we spent Christmas day, much in the same manner we did the preceding one. We were fortunate in having continual daylight and clear weather, for, had it been foggy as on some of the preceding days, nothing less than a miracle could have saved us from being dashed to pieces."

Thus these hardy English sailors were probably the first to spend Christmas in the Antarctic, though they had no knowledge of the great continent hidden behind the ice and fog. To the rugged conditons of life under sail in the 18th century were added the bitter cold and storms of those dangerous waters. The men aboard the 'Resolution' and 'Adventure' must have revelled in the succulent goose and well-travelled Madeira. They celebrated in a calm sound. In three days they would stand out to sea and round Cape Horn on the last leg of their circumnavigation of the Pole.

On every map of the world before 1772 there were enormous unexplored spaces around the southern Pole. This part of the map was filled with imaginary lands and people or with a great empty land mass capped by billowing clouds and labelled 'Terra Australis Incognita.' After Cook's return from his second voyage it was clear to the world there was no southern continent. He had sailed right around the bottom of the world, finding everywhere nothing but great fields of ice. He concluded that, "the risk in these icy seas is so great that no man will ever venture further, and therefore lands which may lie to the south will never be explored. Should they be, I make bold to declare that the world will derive no benefit from it." A hundred years later Sir James Clark Ross penetrated the ice pack and found the continent.

Beginning in 1819 and continuing through the century, American, British, French and Russian sealers, whalers, and explorers navigated the Antarctic waters, discovering more and more of the continental edge. They celebrated Midsummer Day, December 21st, and Christmas, together, looking forward eagerly to the festive day. An extra ration of rum, a half-day holiday from the arduous business of killing seals, boiling the blubber, or working the ships, was the rule. And then back to the task which brought them to spend the Austral summer so far from home.

In 1899 the first of many scientific expeditions spent the whole year on the continent. Here is their Christmas:

"The day broke bright and clear with the Union Jack flying merrily at the flagstaff. It was now warm in the sun . . . open water everywhere. We turned our shirts this morning. We celebrated by speeches, and with pardonable pride

reminisced on the work accomplished. We had tinned plum pudding and brandied peaches; and Mr. Evans, in honor of the occasion, baked cakes; and Mr. Ellefson even surpassed himself in the excellence of his cooking. The Finns enjoyed as usual their bath. In midwinter Per Savio had dug himself an apartment under the snow, some ten feet square and six feet high. Here he placed a small iron stove and put an iron funnel through the snow. He covered the entrance, made a big fire in the stove, and soon the place was covered with hot moist steam. Here they completely undressed and remained thus for about an hour . . . still it was a remarkable feature that it was about 40° of frost above this icy steam bath.

"In the afternoon we had rifle shooting at the target at 150 yards range. Today several young penguins are out of their shells."

This is C.E. Borchgrevink, Norwegian commander of the British Antarctic Expedition, first to 'winter over.' The two Finns had been brought along because they "were experienced snow shoe runners." Borchgrevink's pioneer geographical, meteorological, and biological work at Cape Adare proved that men could live and work through the long dark winter. This expedition opened up a new effort at discovery. It is the beginning of the Heroic Era in Antarctic research and exploration.

The bulk of the polar outdoor work was and is concentrated during the 3,000 hour summer day. Over much of the continent the sun never sets for many months. Christmas often found explorers far from base on arduous sledging journeys. Often they man-hauled their leather-lashed sledges, heavy with scientific instruments and specimens. Lieutenant Albert Armitage, second in command on Scott's first expedition, describes his 1902 Christmas pause in sledging:

"We are now well to the westward of the Royal Society Range, a grand display viewed from our camp. We were compelled to spend Christmas day in camp for the wind was blowing up to a strong gale in furious squalls, which made us feel glad to have our boulders to windward of us. During the night the heat of our bodies had caused our snow-bed to melt, so that the reindeer bags were wet through by reason of lying in six inches of water. I am afraid that, in consequence, some of the Christmas greetings were more forcible than is usually the case. Fortunately there was a good heat from the sun which soon dried our bedding.

"We celebrated that day as we were unable to travel, by playing euchre, and by having fried cheese and bacon mixed with horse-radish, and two tablespoons of Curaçao each for dinner; and I dare say we enjoyed it much better than many people enjoyed their dinners at home. All the same we would not have turned up our noses at a slice of good old roast beef and a pound or two of plum-duff. In fact we mentioned to each other the various dainties to which we were partial, and, when we slept that night, we dreampt of the many good things we had not got; and in our wakeful moments we thought of those whom we had left behind in the old country, who at this joyful season of the year would breathe many a heartfelt prayer for the safety and well being of the 'Discovery.'

"We made a start again next morning and soon came to very rough ice which resembled a plowed field. We dragged our sledges over this and upward. The ice was full of strange sounds. During the heat of the day water formed in all the little hollows made by the wind and as it did so there was a curious sibilant sound made by the escaping air, like softly dropping rain. At the close of the day, as the ice cooled, it crackled like a newly lit fire. We were now at 4,500 feet. . . ."

The longer these polar heroes sledged across the ice shelves and high plateau the colder and hungrier they became. This eventual preoccupation with food often caused arguments and temporarily-psychotic behavior. A typical daily sledging ration per man was a total of about 34 ounces. This was especially meager at very low temperatures. It included pemmican, biscuit, cheese or chocolate, cocoa, bouillon, sugar, and some kind of cereal, together with tea and a little salt and pepper. A few delicacies would be saved for special occasions. Sir Ernest Shackleton, on his 1908 sledge journey towards the South Pole, saved two tins of sardines and a pot of black currant jam for their Christmas, and ¼ pint of brandy for the attainment of 'furthest south.'

Shackleton invented the system of 'shut-eye' which became known as 'whosing.' It was to become an automatic and rigid system. The food was divided into shares in the pannikins as equally as possible. Then one man turned his back. The divider pointed at a portion of 'hoosh' and asked, "whose?". The man with his back turned and who therefore could not see the portion, named the owner, and so on. Entirely by chance each man got his small bit of supper. Probably the name 'hoosh,' the hot sledging meal, a sort of thick soup or thin stew, came from this question, "whose?".

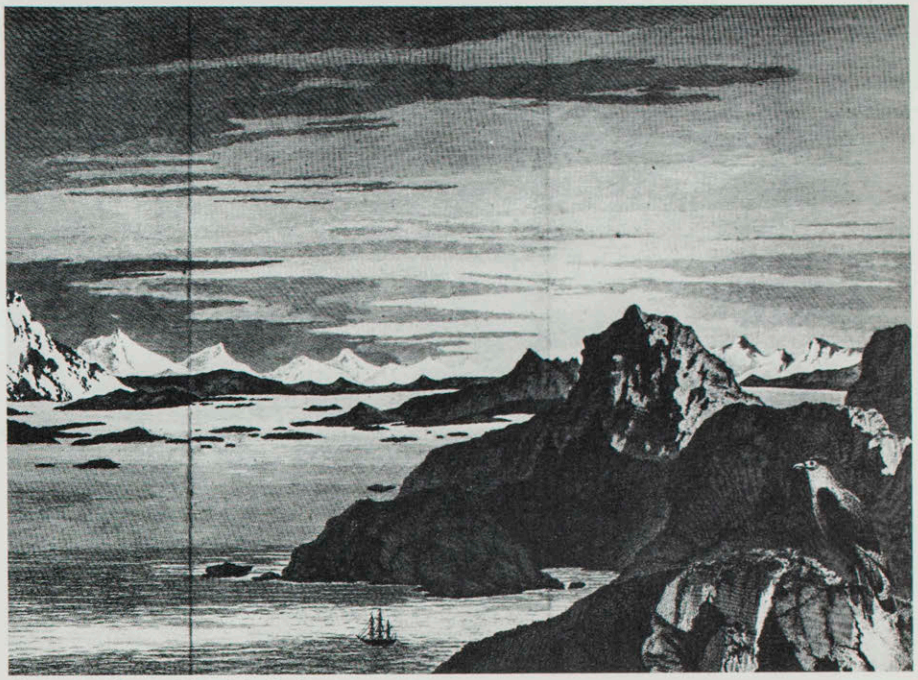
The ice in McMurdo Sound had failed to go out completely during the summer of 1902 and so Christmas of 1903 found the 'Discovery' still fast in the shore ice beside the base. The men had spent a second winter in the Antarctic. Two relief ships were on their way to bring the men of the expedition back to England if the ship was not released before the onset of the new freeze. This was a very disappointing prospect for Captain Scott. It meant leaving most of their specimens and supplies behind forever, and to him personally, an unsuccessful end to his command. Under his orders the men had therefore set about a task each officer must have known to be almost impossible. They were to dynamite and saw a channel through eleven miles of heavy two-year ice from the beset ship to the open sea.

On arriving back from his own long sledging journey Scott headed directly for the 'Sawing Camp.' It was just before Christmas. Here are his words:

"They had been at work about ten days. The main tent was a palatial abode . . . in the men's quarters stood a small cooking stove mounted on boards . . . tables and stools were made of packing cases. Fur bags and blankets set on a tarpaulin on the ice were used for sleeping. Thirty people were in the camp, divided into three parties, relieving each other on the saws . . .

"A typical saw is about eighteen feet long, nine inches deep and two inches thick, with coarse teeth. It is worked by two teams by means of a rope and cross handle on the top of a tripod. One team pulls down and the other pulls up, very much the action of bellringers. From time to time, as the saw advances, the tripod is shifted. Many cuts must be made across the channel course so as to get rid of the ice. In order to make a channel a mile in length it is necessary to cut through four miles of ice . . . very heavy work, and a four hour spell was quite sufficient. Every other day the dog sledge arrived across the ten miles from the ship laden with flour, butter, biscuit, sugar, jam, so that supplies were always available. In spite of difficulties and hard work of the sawing the men were exuberant and overflowing in health and spirits."

Engraving, 'Man in Christmas Sound, Tierra del Fuego' 1st edition, Cook's 2nd Voyage, 1777



Christmas Sound, Cook's 2nd Voyage, 1777

'Christmas Camp amongst the Ice-Borne Boulders.' Discovery Expedition photographs, Royal Geographical Society, London

Toward the end of December Scott added up his figures, agreed to the futility of further operations, and called the sawing, "an experience but nothing more." On January second he ordered the men and equipment back to the ship. A bizarre Christmas, indeed.

Not all of the holidays were cold and bleak, or potentially tragic. Sir Douglas Mawson of Australia, in his beautiful book, 'The Home of the Blizzard,' describes a rollicking party during his 1911–1914 expedition to Adélie Land.

"Puff pastries, steam puddings, jellies and blancmanges, seal curried and spiced, penguin delicately fried, vegetables trimmed and adorned. . . . Speeches were made, toasts drunk, the table creaked with good things. The Hut was ornate with flags and a gaily decorated Christmas tree of green baize, every man spruce in his snowiest cardigan and neck cloth. The gramaphone sang of music hall days, while the wind roared its appreciation through the stove pipe.

"Brightly wrapped presents from the thoughtful ladies of Australia were opened, admired, and squirreled away on higher shelves and in the interstices. The great medium of monetary exchange in the Hut was chocolate. Every Saturday night a ration of thirty squares was distributed by the storeman, and for purposes of betting, games of chance, wind-velocity pools and general barter, chocolate held the premier place. The 'Calcutta Sweeps' was the favorite . . . excitement was intense, while the cartographer in clerical glasses worked out the unknown number in the high and low fields. As a consequence of wild speculation there were several cases of bankruptcy, which was redeemed in the ordinary way by a sale of the debtor's effects.

"Celebration carried late into the night. A mixed concert of carols brought the happy evening to the grand finale—'Auld Lang Syne.'

"The night-watchman has made the bread. The Hut is dark and a shaded burner hangs in the kitchen. The wind is booming in gusts, snow blowing in the pale light. The dogs howl occasionally in the veranda, but the night-watchman and his pipe are at peace with all men. His light romance is closed, he steals to his bunk with a hurricane lamp and finds a bundle of letters. He knows them well, but he reads them—again!"

His ship long crushed and sunk beneath the pack, Shackleton drifted for months on the frozen sea. Just before Christmas, 1915, a sudden strong southwest wind began to break apart the ice on which he was camped. Forced to move his men and boats and supplies to a safer floe, he wrote, "December 22nd was therefore kept as Christmas Day, and most of our small remaining stock of luxuries was consumed at the Christmas feast. We could not carry it all with us, so for the last time for eight months we had a really good meal . . . as much as we could eat. Anchovies in oil, baked beans and jugged hare made a glorious mixture such as we have not dreamed of since our school days. Everybody was working at high pressure, packing and re-packing the sledges and stowing what provisions we were going to take with us in the various sacks and boxes. As I looked around at the eager faces of the men I could not but hope that this time the fates would be kinder to us than in our last attempt to march across the ice to safety.

"With the exception of the night-watchman we turned in at eleven p.m., and at 3 a.m. on December 23rd all hands were roused for the purpose of sledging the two boats over the dangerously cracked portion to the first of the young floes, whilst the surface still held its night crust. A thick sea-fog came up from the west . . . we started off after a drink of hot coffee.

"We marked the track with flags and relayed the sledges and boats. The dog drivers prepared the track around the ice blocks and across the open leads for those who toiled behind with the boats. The dogs were wonderful! Without them we never could have transported half the food and gear that we did . . .

"On the 25th, the third day of our march, a breakfast of sledging rations was served. We wished one another a merry Christmas, and our thoughts went back to those at home. We wondered, too, that day, as we sat down to our 'lunch' of stale bannock and a mug of thin cocoa, what they were having at home . . . "During the night a crack formed right across the floe, going under Wild's tent. We hurriedly shifted to a strong old floe about a mile and half to the east of our present position. The ice all around us was now too broken and soft to sledge over, and yet there was not sufficient water to allow us to launch the boats with any degree of safety. The men were getting weak. As we only had food for forty two days, there was no alternative, therefore, but to camp once more on the floe and to possess our souls with what patience we could till conditions should appear more favorable. To this end we stacked our surplus provisions, the reserve sledging rations being kept lashed on the sledges, and brought what gear we could from our but lately deserted Ocean Camp. Our new home, which we were to occupy for nearly three and a half months, we called 'Patience Camp'."

Shackleton was one of the most valiant and beloved of all Antarctic explorers. He did succeed in getting his men to an island. There they existed on seals, penguins, and the remaining meager supplies, waiting. After a long and dangerous journey in an open boat across the south Atlantic he found a way to rescue every one of his men the following August.

In the last quarter of the 19th century many whaling ships roamed the Ross Sea, harvesting the great blue whale. F.V.Morley and J.S.Hodgson in "Whaling North and South," are writing about their Christmas:

"The crew began to make elaborate preparations for the greatest of all festivals. We had on board a half a dozen very fine pigs that were to provide us with fresh meat. In addition to these foredoomed animals we had managed to keep a few chickens alive . . . The great day at last arrived; the gunners had all come in with their catchers for a brief spell of merry making. (Catchers are small fast boats used to hunt and bring the whales to the factory ship.) Good food and company and plenty of whisky were a treat sufficient to banish the hankering after Yuletide at home, which naturally worries one so far away from the family hearth.

"Our steward had put forward his best efforts. Extraordinary exertions had been made to keep the saloon spick and span, a task by no means easy, because everybody who stepped into the place unavoidably brought with him some of the whale grease lying thick about the deck outside. The worst offender in this respect was the engineer's dog, which, in spite of the precautions of the stewards who repeatedly turned him out unceremoniously, would artfully wait until somebody opened the saloon door, and then slink quietly through, leaving greasy tracks of his paws all over the floor.

"I think the steward found some reward for his endeavors when we all proceeded in our best clothes with the congenial task of making that Christmas a memorable one. There was nothing to grumble about on the score of fine things to eat and drink, the fresh pork, of course, taking precedence as the pièce de rèsistance. I watched the proceedings with

great interest, however inwardly marvelling at the enormous eating capacity of the Norsemen. A game of soccer was suggested, with the blubber deck as the playing area. The Tasmanians knowledge of the sport did not go beyond knowing that a round ball was necessary. The weather being cold, sea boots and gloves were worn. The football was made of ancient socks, and although on the small side, looked as though it would stand up to a few weighty kicks. So many Norwegians joined in that when the blubber deck was reached, the respective sides numbered nearer twenty than eleven. No one foolish enough to act in the capacity as umpire could be found, but as the rules of soccer were unknown, it did not matter. The game started with a menacing forward movement, which was followed by a yell of dismay when the ball was smitten by a well-directed sea boot, and immediately finished its brief sporting career by sailing over the rails into the sea. The game was by no means over as more socks in a more decayed condition were plentiful. The game soon took the form of wild erratic kicking with the result that more shins were kicked than goals. At the end it was mutually agreed that the honours were even.

"Later the Norwegians sang their folk songs and I very soon began to pick these out on my mandolin. When things were thoroughly set going I sprang a surprise on the party by playing, 'A Bicycle Built for Two,' which was at that time very popular in Norway. Their surprise when I gave them the English version was comical to witness. . . . The entertainment became merry and boisterous, and each man was ready and willing to contribute his item to the impromptu programme. The captain gave us his roaring chanteys, Lars Andersen did a jolly dance, resembling a series of leaps and bounds rather than a ballet, Bernsten committed musical murder on the accordion.

"The custom of giving presents to every member of the crew was carried out. The presents came from the slop chest and were wrapped in paper to conceal them. Slippers, socks, scarves, razors, soap, mufflers, fur caps and dozens of other things that sailors find useful.

"Next morning saw the gunners off once more to their hunting. In the dim light of the dawn they disappeared from the ship's side with many a shout of good-fellowship passed back and forth. And so away to their rough tasks, no doubt all the better for the break in the routine."

'Relief ships Approaching 'Discovery.' Discovery Expedition photographs, Royal Geographical Society, London

A poignantly haunting Christmas is that spent by Robert Falcon Scott on his second expedition to the Antarctic. He and his companions were on their long race to the Pole in 1911. Unknown to them the Norwegian, Roald Amundsen, had reached that goal on the morning of December fifteenth. By Christmas he was well along on his return journey by dog-sled. In contrast Scott and his men would die on their punishing trek back from the Pole, immobilized in their tent by a nine-day blizzard. They were only eleven miles from their next depot of food and fuel. Their diaries were found with their bodies:

"December 24th. The wind is continuous from the SSE, very searching, our faces getting iced up. It is evident we are skirting more pressure ridges . . . we have not struck a crevasse all day, which is a good sign. About us is a scene of the wildest desolation, but we are a very cheerful party and tomorrow is Christmas day with something extra in the 'hoosh.'

"Monday, December 25th. A good deal of drift, about a foot high, but we went along in fine style. We found ourselves among crevasses once more, several of us went half down . . . Lashly went completely down very suddenly, nearly dragging the crew with him, the sledge jammed fortunately, and the Alpine rope was used to pull him to the surface. Lashly is forty four today and hard as nails. His fall has not even disturbed his equanimity.

"Night, Camp 47. Temperature 13°, marched until 7:30, covered fifteen miles, a fine view of the Dominion Range. For supper we had four courses. The first, pemmican, full whack, with slices of horse meat flavored with onion and curry powder and thickened with biscuit; then a cocoa and biscuit hoosh sweetened, then a plum pudding; then cocoa with raisins, and finally a dessert of caramels and ginger. After the feast it was difficult to move. We felt thoroughly warm and very sleepy . . .

"We are on the 86th parallel, height 9,050, 214 miles to go.

"Very heavy pulling. It will be a strain to keep up distances if we get surfaces like this. Steady plodding means forgetfullness and advance.

"We had an extra drink of tea and are now turned into our bags in the double tent (five of us) as warm as toast, and just enough light to write with. What lots of things we think of on these monotonous marches. What castles one builds now hopefully that the Pole is ours. We

feel the cold very little. There is no wind . . ."

Admiral Richard E. Byrd stands at the beginning of the modern age of scientific exploration in the Antarctic. He writes in 1930 in "Little America," "On our second Christmas day (we had two because we recrossed the 180th Meridian) an imperceptible brightening in the southern sky—'barrier blink'—suggested the proximity of the Barrier. As the second was the official Christmas day, I sacrificed a ton or two of coal for sentimental reasons, in speeding up engine revolutions, hoping thereby to make the Barrier before the end of the day. I felt that a glimpse of this mysterious Antarctic rampart which we had fought so hard to gain would be an exciting gift to the men. The Ross Sea was smooth as a mill pond, and the air so fresh and pure that breath was a delight. For all the anxiety with which we anticipated landing, we went forward with our celebration. It was a most excellent affair. Tennant served a fine dinner. . . .

"In the midst of this, Strom's voice coming from the crow's nest, 'Barrier on the starboard bow' fell with especially abrupt swiftness . . . there was a clatter of dishes . . . the race of footsteps up the companionway, and a wild crowding of men on the fo'c'sle head and in the rigging. The thing we had come so far to see was before our eyes, a far-flung reach of lifted ice, stretching east and west as far as the eye could see . . . the crew cheered and pounded one another's back."

Today, with modern comfort and safety, Christmas is still a time of loneliness for each of the scientists and technicians in the Antarctic. Out in the Ellsworth Mountains a chopper whirrs in on a field party of geologists. Bright red, it touches down, bringing Christmas mail and fresh food (zip code—96692). The weather has been bad in early December, and these Navy pilots must postpone their festivities to use the clear, windless Christmas day to move men and supplies.

At the American McMurdo Base it is a day of ease. The men sleep-in in the morning, play football in bulky thermal boots, sing carols with the New Zealanders from near-by Scott Base. There is a quiet time in the chapel, beer in the morning, chilled California wine at night with the traditional huge stuffed turkeys and cranberry sauce. On this special day in a busy schedule several hundred men dine together in the mess. There are presents from home, flown from New Zealand in bulky C130s. Red and green lights pulse on the plastic Christmas tree in a corner of the 'Penguin Palace'.

All day the radio shack is busy. The high point of the day is each man's turn to talk with his family by phone patch via the ham operators in the U.S. He may have signed up weeks ahead for this moment, a three minute conversation for less than nine dollars, from 10,000 miles away.

"When are you coming home, Daddy?"

"Mary sang in the choir and I got a new bike!"

"We went to Grandma's house and Mommy baked a pie."

"Did you have a ride in a helicopter?"

"I miss you."

"I miss you, too, Tommy. Merry Christmas. Be a good boy and put Mommy on now."

And then, perhaps, there is a long echo in a man's heart, "When are you coming home, Daddy?"

Mary P. Goodwin, writer on the Antarctic, continues her love affair with that polar region with this, her second TERRA article.

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Midsummer Day Shower, 5° from the South Pole, temperature −6°F. photo by Emil Schulthess, Black Star, N.Y.

'Relaying the Boats-Shackleton's Expedition,' photo by Frank Hurley

'Dr. Wilson sketching on the way to the Pole,' photo probably by Henry Bowers. Scott's Last Expedition, Robt. Scott, Dodd, Mead & Co.

'Sketch by Dr. Wilson, Mt. Kyffin. December 1911. SPRI MS. 797/2, Cambridge, England

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